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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,512	06/23/2005	Nobuo Oi	2185-0765PUS1	6638
2292	7590	10/19/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			TESKIN, FRED M	
			ART UNIT	PAPER NUMBER

1713

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,512	<b>Applicant(s)</b> OL ET AL.	
	<b>Examiner</b> Fred M. Teskin	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1, 2, 4, 5 is/are rejected.  
 7) ☒ Claim(s) 3, 6 and 7 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. /  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The Reply of August 9, 2006 having been entered, claims 1-7 are currently pending and under examination herein.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The Declaration under 37 CFR 1.132 filed August 9, 2006 has been fully considered and found sufficient to overcome the rejection of claims 1-4 based upon Iseki et al.

Claims 1, 2, 4 and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US 5837791 to Sagane et al ("Sagane"), alone or in view of the evidence provided by Oi et al.

The basis of the rejection and the examiner's position regarding the applied art are adequately set forth in the prior Office action (see pp. 4-5) and that explanation is incorporated herein by reference.

Concerning the added claim limitations as to contents of monomer units in the olefin-based copolymer, Sagane exemplifies (see, e.g., Examples 1, 2, 4, 14) copolymers containing the requisite amounts of monomer units based on an olefin (ethylene) and specific polyene (II) compounds within claim 1. These copolymers also contain propylene in an amount within the recited range of 2 to 97 mol %. While propylene is not a vinyl compound (I) as claimed, Sagane names propylene, 3-methyl-1-

Art Unit: 1713

butene and 3-methyl-1-pentene (among others) as exemplary  $\alpha$ -olefins which may be used singly or in combination of two or more kinds (col. 6, ll. 55-65). Sagane then lists propylene, 1-butene, 1-hexene and 1-octene as preferred (*Id.*, ll.55-65). As noted in the prior action, Oi et al provide evidence that 3-methyl-1-butene and 3-methyl-1-pentene are known to possess Es and B1 parameters meeting the terms of claim 1 (Oi et al, paragraph 0023).

Given the close structural relationship of 3-methyl-1-butene and 3-methyl-1-pentene to propylene, 1-butene and 1-hexene (i.e., neighboring homologues or position isomer), one would have reasonably expected the former to possess properties similar to the latter (preferred) species, including similar copolymerizability with ethylene and the non-conjugated polyene of Sagane. Such expectation of similar performance would have provided ample incentive for one of ordinary skill to modify Sagane by substituting for propylene in the disclosed copolymerization process, an equivalent amount of 3-methyl-1-butene or 3-methyl-1-pentene, and thereby produce the claimed invention.

Applicants' arguments filed August 9, 2006 have been fully considered but are not persuasive of error in the repeated rejection.

The thrust of the arguments concerning Sagane are essentially twofold: (1) the combination of monomers specified in the instant claims is not clearly disclosed in Sagane and (2) Sagane fails to teach or suggest anything about an increase in the molecular weight of an obtained copolymer, by adding the specified polyene (II) to ethylene and the specified vinyl compound (I) in the pending claims (Reply, pp. 9-10).

Art Unit: 1713

As to point (1), the above-cited working examples of Sagane differ from the claims only in the use of propylene instead of a vinyl compound (I) as claimed. Nevertheless, as indicated above and in the prior action, the Sagane teaching equating species of that vinyl compound [3-methyl-1-butene and 3-methyl-1-pentene] with propylene, coupled with the expectation of structurally similar compounds behaving similarly, would have suggested copolymerizing a combination of monomers as specified in the instant claims, applicants' arguments to the contrary notwithstanding.

As to point (2), applicants are apparently arguing that in order to prove unpatentability, the prior art must describe the applicants' motivation, utility or reason for adding the specified polyene (II) to ethylene and the specified vinyl compound (I). However, in order to establish a *prima facie* case, the prior art need only provide motivation to do what the applicant has claimed. *In re Dillon*, 16 USPQ2d 1897, 1902 (Fed. Cir. 1990); *In re Kemps*, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996). With respect to producing an olefin-based copolymer, the motivation to copolymerize a combination of monomers as claimed comes from Sagane's working examples together with its teaching of 3-methyl-1-butene and 3-methyl-1-pentene as alternatively suitable  $\alpha$ -olefin comonomers, their close structural similarity to Sagane's preferred  $\alpha$ -olefins, and the expectation that structurally similar compounds will behave similarly.

Accordingly, the continued rejection is still deemed to be tenable and therefore must be maintained.

Art Unit: 1713

Claims 3, 6 and 7 are objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 1713

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



FRED TESKIN  
PRIMARY EXAMINER  
1713

FMTeskin/10-13-06